REMARKS

The last Office Action has been carefully considered.

It is noted that claims 1, 4, and 5 are rejected under 35 U.S.C. 103 over the patent to Smith in view of the patent to Bennett.

Claim 1 is rejected under 35 U.S.C. 103 over the patent to Liebermen in view of the patent to Bennett.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) over the patent Liebermen or Smith in view of the patent to Bennett and further in view of the patents to Hep and Sanchez.

After carefully considering the Examiner's grounds for the rejection of the claims over the art, applicant has amended claim 1, the broadest claim on file, and added claim 8, which is a second independent claim.

It is respectfully submitted that the new features of the present invention which are now defined in claims 1 and 8 are not disclosed in the

references applied against the original claims and can not be considered as obvious from this reference.

Before the analysis of the prior art, it is believed to be advisable to explain the subject matter of the present invention.

The present invention deals exclusively with a seismic sensor for sensing seismic activity. For this purpose in addition to a case, a pre-charged non-conductive membrane, and a plate which is immovable relative to the case, it has another plate which is movable relative to the case under the action of seismic activity of the medium in which the sensor is located, so that the thusly formed capacitor produces an electrical signal responsive to the seismic activity. In addition, a mass increasing element is associated with the movable plate and formed as a lug attached in the center of the flexible diaphragm in the center of the movable plate formed as an uninterrupted flexible diaphragm extending transversely over a total transverse cross-section of the case. Therefore under the action of seismic activity, when the sensor moves as a whole the diaphragm oscillates as a whole together with the lug.

The patents to Smith do not disclose any seismic sensor for sensing seismic activities. Instead they teach an acoustic microphone which is designed in a completely different manner. The sensor disclosed in the patents to Smith does not have a movable plate formed as an uninterrupted flexible diaphragm which oscillates as a whole under the action of the seismic activity. The patent to Liebermen discloses a pressure and displacement sensor, which does not have an uninterrupted flexible diaphragm which will oscillate under the action of seismic activity. Thus, the primary references do not teach the basic features of the present invention. In order to compare the prior art with the present invention, seismic sensors have to be applied, while to the contrary the primary reference applied by the Examiner are not seismic sensors.

In the present invention, in addition to the uninterrupted flexible diaphragm which reacts to a seismic activity (this feature is not disclosed in any of the references), a mass-increasing element formed as a lug and located in the center of the diaphragm is provided, to enhance oscillations of the flexible diaphragm under the action of the seismic activity. No structure is provided in the primary references to enhance oscillations of the flexible diaphragm or movable plate under the action of the seismic activity.

The secondary reference, namely the patent to Bennett applied by the Examiner is a movement sensor as clearly explained in this reference. Also, the reference has nothing to do with seismic sensors, since it is used for detecting movements and use the detection correspondingly. This reference also does not teach the new features of the present invention as defined in the independent claims. The movement sensor here does not have a pre-charged non conductive membrane.

While the primary references disclose an acoustic microphone and a pressure/displacement sensor, the patent to Bennett discloses a movement sensor. Thus, any combination of the references would not lead to a seismic sensor for seismic sensing activity. Also, the references do not teach a lug attached in the center of the uninterrupted flexible diaphragm which reacts to the seismic activity of a seismic sensor.

It is therefore believed that the new features of the present invention as defined in claim 1 are not disclosed in the references and can not be derived from them as a matter of obviousness.

Claim 8 additionally defines that the central lug is a one-piece integral element having a transverse dimension which is a fraction of the

transverse dimension of the flexible diaphragm. This feature is also not disclosed in any of the references.

Only in combination of an uninterrupted flexible diaphragm extending transversely over a total transverse cross-section of the case with a lug located exclusively in the center and formed as one-piece integral element having a transverse dimension as a fraction of the diaphragm, the present invention can provide for the highly advantageous results of providing a high accuracy of sensing of seismic activity.

Finally, claim 9 defines the seismic sensor in which the pre-charged, non-conductive membrane is composed of electret which feature is also not disclosed in any of the references.

In view of the above presented remarks and amendments, it is believed that claims 1, 8 and 9 should be considered as patentably distinguishing over the art and should be allowed.

As for the dependent claims, these claims depend on claim 1, they share its presumably allowable features and it is respectfully submitted that they should be allowed as well.

Reconsideration and allowance of the present application is most respectfully requested.

Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place this case in condition for final allowance, then it is respectfully requested that such amendments or corrections be carried out by Examiner's Amendment, and the case be passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, he is invited to telephone the undersigned (at 631-243-3818).

Respectfully submitted,

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